

No.

9800376



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

University of Idaho

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR EXPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Brundage'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this eighth day of May, in the year of our Lord two thousand one.

Attest:

Alvin K. Post

Acting Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Arthur W. Peterson

Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
University of Idaho		ID86-14502B	Brundage
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)		5. TELEPHONE (include area code)	FOR OFFICIAL USE ONLY PVPO NUMBER 9800376
Idaho Agricultural Experiment Station College of Agriculture University of Idaho Moscow, ID 83844-2331		208-885-7173	
7. GENUS AND SPECIES NAME		6. FAX (include area code)	F I L I N G DATE
Triticum aestivum		208-885-6654	9/18/1998
8. FAMILY NAME (Botanical)		FILING AND EXAMINATION FEE	
Gramineae		F E E S \$ 2.450	
9. CROP KIND NAME (Common name)		DATE 9/14/98	
Soft White Winter Wheat		CERTIFICATION FEE: \$ 320.00	
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)		DATE 3/7/01	
Land grant college			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS		14. TELEPHONE (include area code)	
Richard Heimsch Idaho Agricultural Experiment Station University of Idaho Moscow, ID 83844-2331		208-885-7173	
Robert S. Zemetra PSES University of Idaho Moscow, ID 83844-3339		15. FAX (include area code) 208-885-6654	
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)			
<input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository) <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(e) of the Plant Variety Protection Act)			
<input checked="" type="checkbox"/> YES If "yes," answer items 18 and 19 below <input type="checkbox"/> NO If "no," go to item 20			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?			
<input type="checkbox"/> YES If "yes," give names of countries and dates <input checked="" type="checkbox"/> NO			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.			
The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.			
Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT (Owner(s))		SIGNATURE OF APPLICANT (Owner(s))	
Richard C. Heimsch		Robert S. Zemetra	
NAME (Please print or type)		NAME (Please print or type)	
RICHARD C. HEIMSCHE		Robert S. Zemetra	
CAPACITY OR TITLE		CAPACITY OR TITLE	
IAES DIRECTOR		Professor	
DATE		DATE	
9/15/98		9/15/98	

EXHIBIT A. ORIGIN AND BREEDING HISTORY OF BRUNDAGE

Brundage was derived from the cross ID86-145 with the pedigree 'Stephens'/'Geneva'. ID86-145 was advanced using the bulk method in the F₂ and F₃ generations. From the F₃ bulk populations, individual heads were harvested with no intentional selection and planted out in head rows. In the F₄ generation, selection was made for height, lodging resistance, disease resistance, percent grain protein, and SDS sedimentation value. From these head rows ID86-14502B was advanced for testing in Aberdeen, Idaho under irrigation. After selection under irrigation, ID86-14502B was evaluated under dryland and irrigated conditions in northern and southern Idaho. ID86-14502B was advanced into the Western Regional White Winter Wheat Nursery in 1994 for three years of testing (1994, 1995, 1996). In 1996 and 1997, ID86-14502B was tested in extension trials in Idaho, Washington and Oregon. ID86-14502B was evaluated by the Pacific Northwest Quality Council in 1996. In 1995, approximately 1000 head rows were grown at Moscow, Idaho and selected for uniform plant type. Seed from head rows that were true to type were harvested and planted at Moscow in 1996 to form breeder's seed. Brundage has been examined for uniformity and absence of segregation since it was placed in advanced yield testing in 1992. ^{AND WAS FOUND TO BE UNIFORM AND STABLE OVER THAT PERIOD.} Taller (3 to 4 inches), awnletted variants with head morphology similar to Brundage have been observed in foundation seed fields of Brundage at a frequency of .0006% variants per acre (approximately 5 variant plants per acre).

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per phone call
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EXHIBIT B. NOVELTY STATEMENT

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Per phone call
2-9-01

Brundage soft white winter wheat is most similar to the soft white winter wheat Stephens and is intended as a replacement for Stephens in southern Idaho. It is similar to Stephens in leaf color (blue-green) and response to most diseases in the Pacific Northwest. Brundage can be distinguished from Stephens based on the absence of awns, height, and date of head emergence. Brundage is ^{apically}awnletted while Stephens is awned. Height differences were determined in advanced yield trials grown in four dryland sites over two years. Each nursery was planted in a randomized complete block design with three replications. Each plot was 5 x 10 feet with approximately 1200 plants per plot. Height for a given plot was based on the average height of the plants at maturity (approximately two weeks before harvest) in the plot. Data for each cultivar for a site was based on the average height for the three replicates. Data was analyzed using ANOVA and means compared using LSD at 0.05 probability. In the dryland trials, Brundage was found to be shorter than Stephens at maturity, averaging 4 inches shorter across locations and years (Exhibit E, Table 1).

Brundage is earlier than Stephens in date of head emergence under dryland conditions based on heading date data collected in the Moscow, Idaho advanced yield trial over three years (Exhibit E, Table 2). Date of anthesis or heading was taken for each plot by visually estimating when 50% of the heads had emerged on the plant tillers in the plot. Head emergence was based on the peduncle node being above the collar of the flag leaf. Data for each location is based on the mean of the three replicates in the nursery. Date of head emergence was calculated using the Julian calendar. At the Moscow site, Brundage had an earlier heading date than Stephens based on mean separation tests.

Brundage can also be differentiated from Stephens in its level of stripe rust resistance. It has only partial adult resistance and will give a susceptible reaction with an early infection or in cool/wet spring/early summer environmental conditions (Exhibit E, Table 3). Both Brundage and Stephens have a large seed that would be classified as soft based on near-infrared analysis ('soft' classified as having a NIR score of less than 50) (Exhibit E, Tables 10 and 14). Near-infrared analysis scores are based on single replication 30 gram samples from the advanced yield trials.

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S) University of Idaho	FOR OFFICIAL USE ONLY	
	PVPO NUMBER	9800376
	VARIETY NAME	
	Brundage	
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Idaho Agricultural Experiment Station College of Agriculture University of Idaho Moscow, ID 83844-2331	TEMPORARY OR EXPERIMENTAL DESIGNATION	
	ID86-14502B	

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g., or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1

1=Common

2=Durum

3=Club

4=Other (SPECIFY) _____

2. VERNALIZATION:

2

1=Spring

2=Winter

3=Other (SPECIFY) _____

3. COLEOPTILE ANTHOCYANIN:

1

1=Absent

2=Present

4. JUVENILE PLANT GROWTH:

3

1=Prostrate

2=Semi-erect

3=Erect

5. PLANT COLOR (boot stage):

3

1 = Yellow-Green

2 = Green

3 = Blue-Green

6. FLAG LEAF (boot stage):

1

1 = Erect

2 = Recurved

2

1 = Not Twisted

2 = Twisted

7. EAR EMERGENCE:

0 4

Number of Days Earlier Than Stephens

Number of Days Later Than _____

8. ANTER COLOR:

1

1 = YELLOW

2 = PURPLE

9. PLANT HEIGHT (from soil to top of head, excluding awns):

cm Taller Than _____

0 .9

cm Shorter Than Stephens

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

9800376

10. STEM:

A. ANTHOCYANIN

☐ 1 = Absent 2 = Present

B. WAXY BLOOM

☐ 2 = Absent 2 = Present

C. HAIRINESS (last internode of rachis)

☐ 1 = Absent 2 = Present

D. INTERNODE (SPECIFY NUMBER)

☐ 3 = Hollow 2 = Semi-solid 3 = Solid

E. PEDUNCLE

☐ 1 = Absent 2 = Present

☐ cm Length

11. HEAD (at Maturity):

A. DENSITY

☐ 3 = Lax 2 = Middense 3 = Dense

B. SHAPE

☐ 1 = Tapering 2 = Strap 3 = Clavate 4 = Other (SPECIFY)

C. CURVATURE

☐ 2 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS

☐ 2 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

12. GLUMES (at Maturity):

A. COLOR

☐ 1 = White 2 = Tan 3 = Other (SPECIFY)

B. SHOULDER

☐ 2 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

C. BEAK

☐ 1 = Obtuse 2 = Acute 3 = Acuminate

D. LENGTH

☐ 3 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

E. WIDTH

☐ 3 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

☐ 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

☐ 1 = Rounded 2 = Angular

C. BRUSH

☐ 2 = Short 2 = Medium 3 = Long

☐ 1 = Not Collared 2 = Collared

D. CREASE

☐ 2 = Width 60% or less of Kernel
 2 = Width 80% or less of Kernel
 3 = Width Nearly as Wide as Kernel

☐ 3 = Depth 20% or less of Kernel
 2 = Depth 35% or less of Kernel
 3 = Depth 50% or less of Kernel

9800376

13. SEED: (continued)

E. COLOR

☐ 1

1 = White

2 = Amber

3 = Red

4 = Other (SPECIFY) _____

F. TEXTURE

☐ 2

1=Hard

2=Soft

G. PHENOL REACTION (see instructions):

☐ 4

1 = Ivory

2 = Fawn

3 = Light Brown

4 = Dark Brown

5 = Black

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

Stem Rust (*Puccinia graminis* f. sp. *tritici*)☐ 1Leaf Rust (*Puccinia recondita* f. sp. *tritici*)☐ 0Stripe Rust (*Puccinia striiformis*)☐ 3

partial adult resistance

Loose Smut (*Ustilago tritici*)☐ 0Tan Spot (*Pyrenophora tritici-repentis*)☐ 0Flag Smut (*Urocystis agropyri*)☐ 0Halo Spot (*Selenophoma donacis*)☐ 0Common Bunt (*Tilletia tritici* or *T. laevis*)☐ 1

Septoria nodorum (Glume Blotch)

☐ 0Dwarf Bunt (*Tilletia controversa*)☐ 1

Septoria avenae (Speckled Leaf Disease)

☐ 0Karnal Bunt (*Tilletia indica*)☐ 1

Septoria tritici (Speckled Leaf Blotch)

☐ 1Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)☐ 3Scab (*Fusarium* spp.)☐ 0

"Snow Molds"

☐ 0

"Black Point" (Kernel Smudge)

☐ 0Common Root Rot (*Fusarium*, *Cochliobolus* and *Bipolaris* spp.)☐ 0

Barley Yellow Dwarf Virus (BYDV)

☐ 0Rhizoctonia Root Rot (*Rhizoctonia solani*)☐ 0

Soilborne Mosaic Virus (SBMV)

☐ 0Black Chaff (*Xanthomonas campestris* pv. *translucens*)☐ 0

Wheat Yellow (Spindle Streak) Mosaic Virus

☐ 0Bacterial Leaf Blight (*Pseudomonas syringae* pv. *syringae*)☐ 0

Wheat Streak Mosaic Virus (WSMV)

☐ 1

Other (SPECIFY) _____

Other (SPECIFY) *Hymenula cerealis*☐ 1*Cephalosporium stripe*

Other (SPECIFY) _____

Other (SPECIFY) *Pseudocercospora*☐ 1*herpotricoides*

Other (SPECIFY) _____

Other (SPECIFY) _____

☐

Other (SPECIFY) _____

☐

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

9800376

PLEASE SPECIFY BIOTYPE (where needed)

Hessian Fly (*Mayetiola destructor*)

☐ 0

Other (SPECIFY) _____

☐

Stem Sawfly (*Cephus* spp.)

☐ 0

Other (SPECIFY) _____

☐

Cereal Leaf Beetle (*Oulema melanopa*)

☐ 0

Other (SPECIFY) _____

☐

Russian Aphid (*Diuraphis noxia*)

☐ 1

Other (SPECIFY) _____

☐

Greenbug (*Schizaphis graminum*)

☐ 0

Other (SPECIFY) _____

☐

Aphids

☐ 1

Other (SPECIFY) _____

☐

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

128 126 12

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EXHIBIT D. OBJECTIVE DESCRIPTION OF BRUNDAGE

Brundage is an early, awnletted, semi-dwarf wheat with excellent straw strength. It is shorter (4 in.) and earlier heading (3 to 6 days) than the cultivar 'Stephens' (Exhibit E, Tables 1 and 2). Glumes are white with an oblique shoulder and an obtuse beak. The kernels are white, soft and ovate, with a mid-sized germ and a mid-deep to deep crease. Brundage has partial adult plant resistance to prevalent biotypes of stripe rust in southern Idaho. Its level of stripe rust (caused by *Puccinia striiformis* Westend.) resistance may be inadequate in other regions of the Pacific Northwest in some years based on stripe rust resistance evaluation in the Western Regional Uniform Soft Winter Wheat Nursery (Exhibit E, Table 3). It is susceptible to Cephalosporium stripe (caused by *Hymenula cerealis* Ellis & Everh.), strawbreaker footrot (caused by *Pseudocercospora herpotricoides* (Fron) Deighton), septoria tritici blotch (caused by *Septoria tritici* Roberge in Desmaz.), common bunt (caused by *Tilletia tritici* (Bjerk.) G. Wint. in Rabenh.), and dwarf bunt (caused by *Tilletia controversa* Kühn in Rabenh.) (Exhibit E, Table 4). Brundage is moderately susceptible to powdery mildew (caused by *Erysiphe graminis* DC. f. sp. *tritici* Em. Marchal). Brundage will show physiological leaf spot under cool, wet spring field conditions.

Brundage is adapted to the irrigated areas of southern Idaho. In three years of evaluation in irrigated trials in Idaho (8 site-years), Brundage has been equal to Stephens for yield under irrigation, averaging 145 bu/acre compared to 144 bu/acre for Stephens (Exhibit E, Table 5). Brundage is equal to Stephens for grain volume weight under irrigation. Averaged over 8 site-years, the grain volume weight for Brundage was 57.6 lbs/bu. compared to 56.6 lbs/bu. for Stephens (Exhibit E, Table 6). Brundage performs

well in the intermediate- to high-rainfall regions of the Pacific Northwest with a yield potential slightly lower than Stephens, averaging 100 bu/acre compared to 110 bu/acre for Stephens in yield trials in Idaho (12 site-years)(Exhibit E, Table 7). Grain volume weight of Brundage was slightly greater than Stephens (59.1 lbs/bu to 58.1 lbs/bu) in the dryland trials in northern Idaho (Exhibit E, Table 8).

Brundage has excellent quality characteristics under both irrigated and dryland conditions. In three years of evaluation under irrigation in southern Idaho, Brundage was equal in percent flour protein, NIR hardness, percent flour yield, and sugar snap cookie diameter to Stephens (Exhibit E, Tables 9, 10, 11, 12). In advanced yield trials under dryland conditions in northern Idaho, Brundage was equal to Stephens for percent flour protein and sugar snap cookie diameter (Exhibit E, Tables 13 and 16), lower for NIR hardness value (Exhibit E, Table 14), and lower in percent flour yield (Exhibit E, Table 15). In three years of testing in the Western Regional Uniform Soft Winter Wheat Nursery, composite samples of Brundage were equal to Stephens for percent grain protein, percent flour yield, sugar snap cookie diameter, and sponge cake volume (Exhibit E, Table 17). In the 1996 Pacific Northwest Quality Council evaluation, Brundage was considered to have superior end-use quality characteristics for domestic soft white winter wheat end-use products.

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EXHIBIT ~~E~~ D. ADDITIONAL DESCRIPTION OF BRUNDAGE

Table 1. Height measurements at maturity for Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1997 and 1998 in Moscow, Tammany, Tensed, and Fenn, Idaho.

Table 2. Date of head emergence for Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow, Idaho.

Table 3. Western Regional White Winter Wheat Nursery stripe rust evaluation for Stephens and Brundage in 1995 and 1996 in Mt. Vernon, Walla Walla, and Pullman, Washington.

Table 4. Western Regional White Winter Wheat Nursery dwarf bunt evaluation of Madsen and Brundage in 1995, 1996, and 1997 in Logan, Utah.

Table 5. Yield of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen, Kimberly, and Parma, Idaho.

Table 6. Grain volume weight (lbs/bushel) of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen, Kimberly, and Parma, Idaho.

Table 7. Yield of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow, Tammany, Tensed, and Fenn, Idaho.

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Table 8. Grain volume weight (lbs/bushel) of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow, Tammany, Tensed, and Fenn, Idaho.

Table 9. Percent flour protein of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen, Kimberly, and Parma, Idaho.

Table 10. Near infrared hardness (NIR) values of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen, Kimberly, and Parma, Idaho.

Table 11. Percent flour yield of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen, Kimberly, and Parma, Idaho.

Table 12. Sugar snap cookie diameter of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen, Kimberly, and Parma, Idaho.

Table 13. Percent flour protein of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow, Tammany, Tensed, and Fenn, Idaho.

Table 14. Near infrared hardness (NIR) values of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow, Tammany, Tensed, and Fenn, Idaho.

Table 15. Percent flour yield of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow, Tammany, Tensed, and Fenn, Idaho.

Table 16. Sugar snap cookie diameter of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow, Tammany, Tensed, and Fenn, Idaho.

Table 17. Western Regional White Winter Wheat Nursery quality evaluation of Stephens and Brundage for 1995, 1996, and 1997.

Table 1. Height measurements at maturity for Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1997 and 1998 in Moscow (mos), Tammany (tam), Tensed (ten) and Fenn (fenn), Idaho. All sites are dryland sites in northern Idaho planted in October of the previous year and harvested in August. Height data was collected on three replicates two weeks prior to harvest taking the average height of the plants in each replicate. Height in the table is given in inches.

entry	mean (in.)	mos-97 (in.)	mos-98 (in.)	tam-97 (in.)	tam-98 (in.)	ten-97 (in.)	ten-98 (in.)	fenn-97 (in.)	fenn-98 (in.)
Stephens	37	38	42	32	41	35	38	29	40
Madsen	37	38	39	33	40	38	38	30	39
Hill 81	40	42	43	34	46	41	42	32	43
Lambert	40	40	45	35	43	40	38	33	42
Brundage	33	34	37	28	38	30	33	24	36
stand. dev.	1.31	1.02	1.70	1.14	1.82	1.43	1.28	1.25	
F value	12.06**	17.10**	7.72**	16.56**	11.35**	8.15**	12.23**	11.78**	
LSD (0.05)	3	2	3	2	3	2	2	2	

** indicates significance at P=0.01

F value calculated from a 56 entry nursery with 3 replications

** indicates significance at $P=0.01$

F value calculated from a 56 entry nursery with 3 replications

Table 2. Date of head emergence for Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow, Idaho. The Moscow site is a dryland site that was planted in October of the previous year listed and harvested in August. Date of head emergence was collected when 50% of the heads had emerged from the flag leaf in a plot. Data was collected based on the Julian calendar with the the first date (1) corresponding to January 1.

<u>entry</u>	<u>mean</u>	<u>mos-96</u>	<u>mos-97</u>	<u>mos-98</u>
Stephens	163	162	165	161
Madsen	165	165	165	165
Hill 81	166	166	167	165
Lambert	163	162	165	161
Brundage	158	159	159	155
stand. dev.	0.76	0.92	1.05	
F value	23.83**	14.37**	22.69**	
LSD (0.05)	1	2	2	

** indicates significance at $P=0.01$

F value calculated from a 56 entry nursery with 3 replications

Table 3. Western Regional White Winter Wheat Nursery stripe rust evaluation for Stephens and Brundage in 1995 and 1996 in Mt. Vernon, Walla Walla, and Pullman Washington. Plots were planted in September of the previous year. Data was collected in May at Mt. Vernon, June at Walla Walla, and June in Pullman. Percent refers to percent infection and type refers to infection type designated by a 0 to 9 scale (0 = no rust, 1 to 3 = resistant, 4 to 6 = intermediate, and 7 to 9 = susceptible). An = sign indicates a range of infection types on the same plant indicative of variable resistance).

<u>location</u>	<u>year</u>	Stephens		Brundage	
		<u>percent</u>	<u>type</u>	<u>percent</u>	<u>type</u>
Mt Vernon, WA	1995	5	2=5	90	5
	1996	5	2	95	5=8
Walla Walla, WA	1995	0	0	1	2
	1996	1	2	5	5
Pullman, WA	1995	0	0	10	5=8
	1996	0	0	20	2=5

Table 4. Western Regional White Winter Wheat Nursery dwarf bunt evaluation of Madsen and Brundage in 1995, 1996, and 1997 in Logan, Utah.

<u>year</u>	Madsen	Brundage
	<u>%</u>	<u>%</u>
1995	35	87
1996	8	35
1997	20	90

Table 5. Yield of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen (aber), Kimberly (kim), and Parma (parma), Idaho. All three sites are irrigated sites with the first irrigation applied prior to planting in October of the previous year and harvested in August of the year shown in the table. Yield shown reflects the mean of three replicates. LSD based on analysis of variance of the complete Advanced yield trial (56 entries).

entry	mean (bu/ac)	aber-96 (bu/ac)	aber-97 (bu/ac)	aber-98 (bu/ac)	kim-96 (bu/ac)	kim-97 (bu/ac)	parma-96 (bu/ac)	parma-97 (bu/ac)	parma-98 (bu/ac)
Stephens	143.6	150	142	147	139	142	155	140	134
Madsen	137.3	135	143	127	144	136	141	140	132
Hill 81	139.3	133	154	130	134	149	156	132	126
Lambert	142.0	155	152	117	146	142	150	148	126
Brundage	145.4	154	141	136	167	137	148	150	130
LSD (0.05)		20	16	25	24	20	18	15	12

Table 6. Grain volume weight (lbs/bushel) of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen (aber), Kimberly (kim), and Parma (parma), Idaho. All three sites are irrigated sites with the first irrigation applied prior to planting in October of the previous year and harvested in August of the year shown in the table. Grain volume weight for each location/year is based on one replication. An ANOVA was done. As data were not replicated within each site, LSD and F value presented used the interaction between environments x cultivars as an estimate of error.

entry	mean (lbs/bu)	aber-96 (lbs/bu)	aber-97 (lbs/bu)	aber-98 (lbs/bu)	kim-96 (lbs/bu)	kim-97 (lbs/bu)	parma-96 (lbs/bu)	parma-97 (lbs/bu)	parma-98 (lbs/bu)
Stephens	56.6	57.1	52.5	60.1	58.8	54.3	57.3	54.6	58.2
Madsen	57.2	58.0	53.0	61.0	59.2	54.7	58.3	55.6	57.7
Hill 81	57.9	57.8	55.6	61.7	59.9	57.0	56.4	55.7	59.1
Lambert	56.9	57.5	53.5	60.7	59.2	53.2	57.5	53.0	60.6
Brundage	57.6	59.4	54.0	59.6	60.8	55.7	54.7	56.3	60.1

F value 1.75 ns
LSD (0.05) ns
ns indicates not significant

Table 7. Yield of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow (mos), Tammany (tam), Tensed (ten), and Fern (fenn), Idaho. All four sites are dryland sites that were planted in October of the previous year and harvested in August of the year shown in the table. Yield shown reflects the mean of three replicates. F value and LSD were based on analysis of the complete Advanced yield trial (56 entries).

entry	mean (bu/ac)	mos-96 (bu/ac)	mos-97 (bu/ac)	mos-98 (bu/ac)	tam-96 (bu/ac)	tam-97 (bu/ac)	tam-98 (bu/ac)	ten-96 (bu/ac)	ten-97 (bu/ac)	ten-98 (bu/ac)	fenn-96 (bu/ac)	fenn-97 (bu/ac)	fenn-98 (bu/ac)
Stephens	110.1	98	128	106	86	106	131	104	130	115	107	94	116
Madsen	113.8	90	134	128	85	112	130	96	146	129	94	91	130
Hill 81	110.4	96	141	117	76	97	126	113	147	109	98	91	114
Lambert	115.0	101	137	128	82	115	130	110	148	113	100	91	125
Brundage	100.6	93	136	105	61	85	111	91	104	103	125	72	121
F value		3.11**	3.57**	7.61**	1.59*	3.26**	3.39**	5.58**	3.30**	4.84**	2.34**	1.59*	3.45**
LSD (0.05)		8	19	11	20	17	12	22	16	18	11	14	14

* Indicates significance at P=0.05

** Indicates significance at P=0.01

F value calculated from a 56 entry nursery with 3 replications

Table 8. Grain volume weight (lbs/bushel) of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow (mos), Tammany (tam), Tensed (ten), and Fern (fenn), Idaho. All four sites are dryland sites that were planted in October of the previous year and harvested in August of the year shown in the table. Grain volume weight for each location/year is based on one replication. An ANOVA was done. As data were not replicated within each site, LSD and F value presented used the interaction between environments x cultivars as an estimate of error.

entry	mean (lbs/bu)	mos-96 (lbs/bu)	mos-97 (lbs/bu)	mos-98 (lbs/bu)	tam-96 (lbs/bu)	tam-97 (lbs/bu)	tam-98 (lbs/bu)	ten-96 (lbs/bu)	ten-97 (lbs/bu)	ten-98 (lbs/bu)	fenn-96 (lbs/bu)	fenn-97 (lbs/bu)	fenn-98 (lbs/bu)
Stephens	58.1	59.1	58.9	53.7	56.0	58.9	59.4	58.2	60.9	56.8	57.0	58.7	59.8
Madsen	59.3	58.9	59.2	59.5	59.4	59.6	59.8	59.9	61.8	58.4	55.3	59.8	59.9
Hill 81	59.4	58.3	61.1	58.5	60.1	60.3	58.8	61.1	62.3	57.4	57.2	59.6	58.1
Lambert	59.0	59.0	58.2	56.3	59.3	60.1	60.3	59.0	61.8	56.0	57.7	60.5	59.8
Brundage	59.1	58.8	60.1	57.7	57.3	61.2	58.1	59.9	62.6	56.3	58.8	58.4	60.3
F value													
LSD (0.05)													

* Indicates significance at P=0.05

F value calculated from a 56 entry nursery with 3 replications

Table 9. Percent flour protein of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen (aber), Kimberly (kim), and Parma (parma), Idaho. All three sites are irrigated sites with the first irrigation applied prior to planting in October of the previous year and harvested in August of the year shown in the table. Percent flour protein for each location/year is based on one replication. An ANOVA was. As data were not replicated within each site, LSD and F value presented used the interaction between environments x cultivars as an estimate of error.

entry	mean %	aber-96 %	aber-97 %	aber-98 %	kim-96 %	kim-97 %	parma-96 %	parma-97 %	parma-98 %
Stephens	9.5	10.6	9.6	8.9	9.7	8.5	8.0	11.4	9.0
Madsen	9.8	10.7	10.3	9.5	10.8	9.6	7.8	10.1	9.2
Hill 81	9.4	11.0	9.7	9.0	9.2	8.5	8.3	10.7	9.0
Lambert	9.1	10.1	9.6	8.1	9.4	8.4	7.8	11.2	8.3
Brundage	9.0	9.9	9.2	9.1	8.1	8.4	7.9	10.9	8.7
F value	3.02*								
LSD (0.05)	0.5								

* indicates significance at P=0.05

Table 10. Near infrared hardness (NIR) values of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen (aber), Kimberly (kim), and Parma (parma), Idaho. All three sites are irrigated sites with the first irrigation applied prior to planting in October of the previous year and harvested in August of the year shown in the table. NIR hardness values for each location/year is based on one replication. An ANOVA was done. As data were not replicated within each site, LSD and F value presented used the interaction between environments x cultivars as an estimate of error.

entry	mean	aber-96	aber-97	aber-98	kim-96	kim-97	parma-96	parma-97	parma-98
Stephens	21.5	18.0	22.6	32.2	12.1	21.0	16.0	23.9	26.1
Madsen	23.7	23.0	20.0	27.6	16.1	15.5	24.8	22.2	40.5
Hill 81	21.7	11.6	27.9	23.2	15.9	21.9	19.9	23.5	29.5
Lambert	27.4	20.8	32.6	32.0	20.7	22.6	28.0	23.9	38.4
Brundage	16.9	10.2	11.4	26.5	9.2	22.9	13.7	21.7	19.9
F value	5.99**								
LSD (0.05)	4.5								

** indicates significance at P=0.01

Table 11. Percent flour yield of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen (aber), Kimberly (kim), and Parma (parma), Idaho. All three sites are irrigated sites with the first irrigation applied prior to planting in October of the previous year and harvested in August of the year shown in the table. Percent flour yield for each location/year is based on one replication. An ANOVA was done. As data were not replicated within site, LSD and F value presented used the interaction between environment x cultivars as an estimate of error.

entry	mean %	aber-96 %	aber-97 %	aber-98 %	kim-96 %	kim-97 %	parma-96 %	parma-98 %
Stephens	68.7	68.5	64.9	68.8	70.9	68.2	73.4	66.4
Madsen	71.1	69.4	69.7	70.8	73.6	70.1	74.3	69.5
Hill 81	71.3	69.4	71.4	70.9	71.6	72.3	73.5	69.7
Lambert	68.4	67.8	69.2	69.1	69.8	66.5	69.7	66.8
Brundage	68.2	68.6	67.4	68.4	70.6	64.0	72.3	66.3
F value	8.65**							
LSD (0.05)	1.5							

** indicates significance at P=0.01

Table 12. Sugar snap cookie diameter of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Aberdeen (aber), Kimberly (kim), and Parma (parma), Idaho. All three sites are irrigated sites with the first irrigation applied prior to planting in October of the previous year and harvested in August of the year shown in the table. Sugar snap cookie diameter for each location/year is based on one replication. An ANOVA was done. As data were not replicated within each site, LSD and F value presented used the interaction between environment x cultivars as an estimate of error.

entry	mean (cm)	aber-96 (cm)	aber-97 (cm)	aber-98 (cm)	kim-96 (cm)	kim-97 (cm)	parma-96 (cm)	parma-98 (cm)
Stephens	8.6	8.4	8.2	8.5	8.8	8.8	9.0	8.6
Madsen	8.5	8.6	8.4	8.6	8.5	8.3	8.6	8.8
Hill 81	8.7	8.4	8.5	9.1	8.6	8.6	9.0	8.7
Lambert	8.5	8.4	8.1	8.8	8.8	8.1	8.4	8.9
Brundage	8.7	8.9	8.7	8.7	8.8	8.4	8.7	9.0

F value 1.52 ns

LSD (0.05) ns

ns indicates not significant

Table 13. Percent flour protein of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow (mos), Tammany (tam), Tensed (ten), and Fenn (fenn), Idaho. All four sites are dryland sites that were planted in October of the previous year and harvested in August of the year shown in the table. Percent flour protein for each location/year is based on one replication. An ANOVA was done. As data was not replicated within each site, LSD and F value presented used the interaction between environments X cultivars as an estimate of error.

entry	mean %	mos-96 %	mos-97 %	mos-98 %	tam-96 %	tam-97 %	tam-98 %	ten-96 %	ten-97 %	ten-98 %	fenn-96 %	fenn-97 %	fenn-98 %
Stephens	8.3	6.3	8.9	8.7	8.2	8.6	8.0	8.9	8.2	8.7	9.3	7.8	8.3
Madsen	9.0	5.9	10.2	9.6	8.3	10.2	8.1	10.2	10.1	9.9	10.3	6.7	8.9
Hill 81	8.6	5.7	9.0	8.8	7.8	8.6	9.2	9.9	9.3	9.4	10.1	7.2	8.6
Lambert	7.6	5.4	8.3	7.8	7.3	8.3	6.5	8.7	8.4	8.6	8.4	6.4	7.3
Brundage	8.0	6.3	8.7	7.3	7.4	8.7	7.3	8.4	8.7	8.1	8.8	7.8	8.3
F value	14.58**												
LSD (0.05)	0.4												

** indicates significance at P=0.01

Table 14. Near infrared hardness (NIR) values of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow (mos), Tammany (tam), Tensed (ten), and Fenn (fenn), Idaho. All four sites are dryland sites that were planted in October of the previous year and harvested in August of the year shown in the table. Percent flour protein for each location/year is based on one replication. An ANOVA was done. As data was not replicated within each site, LSD and F value presented used the interaction between environments X cultivars as an estimate of error.

entry	mean	mos-96	mos-97	mos-98	tam-96	tam-97	tam-98	ten-96	ten-97	ten-98	fenn-96	fenn-97	fenn-98
Stephens	22.0	26.5	28.3	16.1	6.3	18.0	31.5	9.7	27.1	20.8	17.7	31.7	30.2
Madsen	27.4	25.1	20.2	29.8	14.3	29.3	36.2	23.9	31.2	29.6	21.0	32.6	35.3
Hill 81	22.9	20.1	24.0	23.0	15.9	18.7	27.1	15.6	30.2	22.3	18.0	28.5	31.5
Lambert	27.0	25.3	36.8	22.5	23.0	18.3	31.5	21.3	35.1	22.5	26.8	25.3	35.2
Brundage	16.3	13.6	18.9	14.9	12.6	4.0	20.1	6.3	24.9	18.3	7.9	26.3	27.2
F value	15.16**												
LSD (0.05)	3.3												

** indicates significance at P=0.01

Table 15. Percent flour yield of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow (mos), Tammamy (tam), Tensed (ten), and Fenn (fenn), Idaho. All four sites are dryland sites that were planted in October of the previous year and harvested in August of the year shown in the table. Percent flour yield for each location/year is based on one replication. An ANOVA was done. As data was not replicated within each site, LSD and F value presented used the interaction between environments x cultivars as an estimate of error.

entry	mean %	mos-96 %	mos-97 %	mos-98 %	tam-96 %	tam-97 %	tam-98 %	ten-96 %	ten-97 %	ten-98 %	fenn-96 %	fenn-97 %	fenn-98 %
Stephens	68.1	71.6	70.1	62.6	68.9	69.9	66.0	69.7	68.7	64.2	68.4	70.2	66.3
Madsen	69.8	72.0	70.6	67.8	70.0	71.6	68.0	70.6	72.3	67.4	67.3	72.1	68.3
Hill 81	69.3	70.6	71.5	64.5	72.0	70.4	65.7	73.3	71.5	64.5	69.1	71.8	67.1
Lambert	68.7	70.7	71.4	62.9	70.0	69.5	68.2	71.1	71.4	62.9	70.3	68.9	66.9
Brundage	67.1	69.2	69.3	63.6	68.0	68.0	63.4	69.5	69.3	63.6	67.9	68.4	64.7
F value	11.35**												
LSD (0.05)	0.9												

** indicates significance at P=0.01

Table 16. Sugar snap cookie diameter of Brundage and four soft white winter wheat cultivars grown in the Advanced yield trials in 1996, 1997, and 1998 in Moscow (mos), Tammamy (tam), Tensed (ten), and Fenn (fenn), Idaho. All four sites are dryland sites that were planted in October of the previous year and harvested in August of the year shown in the table. Sugar snap cookie diameter for each location/year is based on one replication. An ANOVA was done. As data were not replicated within each site, LSD and F value presented used the interaction between environments x cultivars as an estimate of error.

entry	mean (cm)	mos-96 (cm)	mos-97 (cm)	mos-98 (cm)	tam-96 (cm)	tam-97 (cm)	tam-98 (cm)	ten-96 (cm)	ten-97 (cm)	ten-98 (cm)	fenn-96 (cm)	fenn-97 (cm)	fenn-98 (cm)
Stephens	8.7	8.7	8.4	8.2	9.1	8.7	8.4	9.0	8.8	8.8	8.7	8.6	8.9
Madsen	8.5	8.9	8.3	8.1	8.2	8.3	8.6	8.6	8.8	8.7	8.6	9.2	8.5
Hill 81	8.7	9.1	8.4	8.4	8.8	8.8	8.3	9.0	8.3	8.6	9.2	8.7	8.7
Lambert	8.5	8.4	8.3	8.3	9.0	8.2	8.6	8.9	8.3	8.5	8.6	8.7	8.7
Brundage	8.8	9.0	8.8	8.7	8.7	8.3	9.0	8.7	9.0	8.8	8.5	9.4	9.4
F value	3.08*												
LSD (0.05)	0.2												

* indicates significance at P=0.05

Table 17. Western Regional White Winter Wheat Nursery quality evaluation of Stephens and Brundage for 1995, 1996, and 1997. Quality tests were conducted at the USDA-ARS Western Regional Wheat Quality Laboratory, Pullman, Washington. Composite samples of each cultivar were made from the wheat grown at various nursery sites in the western United States. In these nurseries, Brundage was grown under the number ID86-14502B.

Year	protein (%) Stephens	protein (%) Brundage	NIR hardness value Stephens	NIR hardness value Brundage	flour yield (%) Stephens	flour yield (%) Brundage	cookie dia. (cm) Stephens	cookie dia. (cm) Brundage	cake vol. (cc) Stephens	cake vol. (cc) Brundage
1995	9.2	9.5	21	16	75.8	74.7	8.7	8.8	1265	1330
1996*	10.9	10.2	9	-9	73.5	74.7	8	8.7	1120	1150
1996	6.6	5.8	6	8	74.4	73.9	8.7	9	1195	1190
1997	8.6	8	13	8	65.2	65.2	9.3	9.4	1255	1255
mean	8.8	8.4	12.3	5.8	72.2	72.1	8.7	9.0	1209	1231

* 1996 WRVWWWN composites were split to form a high protein composite and a low protein composite based on mean percent protein for each location

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AGRICULTURAL MARKETING SERVICE**EXHIBIT E**
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Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) University of Idaho	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER ID86-14502B	3. VARIETY NAME Brundage		
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Idaho Agricultural Experiment Station College of Agriculture University of Idaho Moscow, ID 83844-2331	5. TELEPHONE (include area code) 208-885-7173	6. FAX (include area code) 208-885-6654		
	7. PVPO NUMBER 9860376			
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				
9. Is the applicant (individual or company) a U.S. national or U.S. based company? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country				
10. Is the applicant the original owner? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, please answer one of the following: a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country				
11. Additional explanation on ownership (if needed, use reverse for extra space):				

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2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

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